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June 15, 2018

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Dear Ms. Dortch:

SUBJECT: ET Docket No. 13-49, Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band

The Utah Department of Transportation (UDOT) has as one of its highest priorities the reduction of highway fatality rates, with a goal of Zero Fatalities. The urgency of this task is heightened because of the recent increase in highway deaths. We believe that technologies, including connected (vehicle-to-vehicle and vehicle-to-infrastructure) and automated driving systems, will play a significant role in curbing that upward trend and moving us toward zero deaths. For the connected systems, the technology that is available to us – and has been proven to work – is Dedicated Short Range Communications (DSRC), operating in the 5.9 Gigahertz (GHz) band. We have DSRC systems operationally deployed today, and are actively expanding those deployments. **We urge the FCC to protect that spectrum for this critical, life-saving use and to allow sharing of that spectrum only after thorough and conclusive testing proves that such use will not interfere with this function.**

We noted with great interest the announcement from Toyota on April 16, 2018 that they would be installing DSRC devices on their vehicles beginning in 2021. This follows positive actions by General Motors to install DSRC on one Cadillac model, and just last week at ITS America they announced they will be adding DSRC to additional Cadillac models; in addition, Volkswagen will follow suit to install DSRC in Europe. Based on the positive experience Toyota has had in Japan, where they have nearly 100,000 vehicles with DSRC on-board, Toyota has demonstrated that DSRC applications can prevent crashes and save lives. We share that view, and have been preparing for automotive deployments for several years. We currently have DSRC systems in place on an 11-mile corridor in Salt Lake City, actively communicating with public buses to help them meet their schedules. Another corridor will be operational in August. We are also beginning to deploy DSRC on our snow plows, facilitating communication with our traffic signals to get the roads plowed more efficiently, yielding greater safety for our travelling public. These DSRC deployments are providing mobility and safety enhancements today, and our long

term goal is to have these systems broadly in place by the time that Toyota and other vehicles need our system for safety applications.

We recently reviewed a letter from FCC Commissioners Michael O'Rielly and Jessica Rosenworcel to Toyota North America CEO Jim Lentz, in which the commissioners reminded Toyota that the FCC and other federal agencies are evaluating the possibility of allowing unlicensed devices into the 5.9 GHz spectrum. This letter suggested that DSRC is not yet "out of the conceptual testing phases and out on the road." Our deployment in Utah, fully operational since last year, is evidence that DSRC is well out of the conceptual phases and is, in fact, out on the road.

We join states and cities around the country that have deployed DSRC and are broadcasting messages at signalized intersections. And, as evidenced by the progress of the "SPaT (Signal Phase and Timing) Challenge," an initiative jointly undertaken by several national transportation organizations, interest in using DSRC for life-saving communications and applications is growing rapidly. We are engaged with colleagues across the country, including automakers involved in the Crash Avoidance Metrics Partnership (CAMP), to develop and deploy V2I Safety Applications using DSRC, including Red Light Violation Warnings, Reduced Speed Zone Warning, Curve Speed Warning and Spot Weather Impact Warning.

UDOT is one of 20 state and local transportation agencies in the Coalition for Safety Sooner, which embraces the position that DSRC is ready to be employed today to save lives. In fact, members of the Coalition are moving forward with deployments. DSRC is the only technology available today with the low-latency characteristics needed for safety-critical applications, and has the benefit of more than a decade of testing and application development.

Of course, we recognize that other technologies are being envisioned. In time, Cellular Vehicle-to-Everything (C-V2X) systems will surely be developed. As stated in a letter from the Coalition to the FCC and other agencies in January, it is essential that eventual cellular systems "meet all of the communication standards established today for V2X, so that 5G systems are backwards compatible and complementary to DSRC." A truly complementary deployment would allow both DSRC and 5G to operate together, providing vehicles with redundant information to insure that safety systems operate flawlessly.

We can't allow vehicle systems to operate like cell phones, with dropped calls and fuzzy reception. Unfortunately, we are hearing from the semiconductor industry that, in fact, C-V2X will not be "complementary" to DSRC, in that it will require the same spectrum. We find that information disturbing and counterproductive, since many of us are actively using that spectrum and believe that both systems will have value that will only be enhanced if they can be deployed compatibly and in a complementary manner.

The Coalition also stated that it will be necessary for cellular V2X systems to "be made available on all vehicles, without subscription fees, as DSRC will be." The industry is hinting that V2V communication might be available without a subscription, but that V2X, which supports safety-critical applications with security subscriptions and other critical infrastructure information, may not be. Providing safety applications in vehicles for a fee is unworkable and inappropriate. We submit that protecting the lives of our citizens is a higher priority than the "efficient" use of the band for increasingly demanding entertainment and economic needs.

The letter from Commissioners O'Rielly and Rosenworcel to Toyota indicated that Phase I testing of the impacts of unlicensed use within the 5.9GHz band is complete, and that the FCC intends to move forward into Phase II and Phase III testing "in the coming months." To our knowledge, results from Phase I testing have not yet been made public. It is critical that the community have an opportunity to evaluate the results of that testing and weigh in on the methods and conclusions. Further, moving to Phase II and Phase III in the coming months portends an unreasonably quick schedule, and suggests that the result of future testing is a foregone conclusion. We encourage the FCC and other agencies to move ahead judiciously, with thorough testing and public input, before drawing a conclusion. The status of 5G technology is currently where DSRC was about a decade ago and requires years of evaluation before being used for safety-critical applications.

Researchers at the University of Michigan recently completed a study that quantified the costs of delaying deployment of safety-critical applications. Specifically, they evaluated the cumulative number of lives that will be lost if we wait for a new technology (C-V2X) to be developed and proven. The study states that, "Up to 8.1 million car crashes and 44,000 deaths could be prevented if the federal government mandated connected vehicle technology now, rather than waiting even three years to develop and evaluate competing technologies." That is why we are moving ahead with DSRC deployment now, and value the Toyota and GM announcements.

While C-V2X may be ready for use on our cell phones in just a few years, at least in large urban areas, the intense, iterative testing and real-world development that will be necessary for this technology to be reliably introduced into our automobiles for safety-critical use will take much longer – likely more than five years, resulting in even more lives lost. As an agency responsible for protecting and saving lives, we believe it is inappropriate to delay deployment of proven technologies and needlessly allow the loss of 44,000 human lives – or more – while we wait for something better to come along.

There will always be something better on the horizon, but we must act now, especially when we have trustworthy applications that have been vetted and successfully deployed. This is especially true when the reason for the delay, as stated in the letter from Commissioners O'Rielly and Rosenworcel, is to "increase spectrum for Wi-fi and grow the wireless economy."

Again, we applaud the positive actions announced by Toyota and GM to deploy systems proven to save lives. If the FCC allows shared use of the 5.9GHz spectrum, without clear and definitive demonstration that such sharing will not interfere with these existing safety-critical applications and deployments, the important, life-saving advantages of DSRC could be compromised and degraded. We urge the FCC to move cautiously and preserve the current usage of the DSRC band solely for the purpose of transportation safety. We urge the FCC to put safety first.

Sincerely,

Carlos M. Braceras, P.E.
Executive Director

CMB/dej

Cc: Elaine L. Chao, U.S. Secretary of Transportation